

WHAT IS CLAIMED IS:

1 1. A method of activating an appliance remotely controllable by
2 an existing transmitter, the appliance responding to a radio frequency activation
3 signal based on one of a plurality of rolling code schemes, the method comprising:
4 receiving at least one activation signal transmitted from the existing
5 transmitter, the activation signal including an existing transmitter identifier;
6 examining the at least one received activation signal to determine
7 which of the plurality of rolling code schemes was used by the existing transmitter
8 to generate the received activation signal;
9 determining a new transmitter identifier different from the existing
10 transmitter identifier based on the determined rolling code scheme; and
11 transmitting a new activation signal based on the determined rolling
12 code scheme, the new activation signal including the new transmitter identifier.

1 2. The method of claim 1 wherein the new activation signal is
2 transmitted based on receiving an activation input.

1 3. The method of claim 1 wherein the determination of which
2 rolling code scheme was used by the existing transmitter is based on receiving a
3 programming mode input.

1 4. The method of claim 1 wherein the appliance responds to a
2 radio frequency activation signal based on one of a plurality of fixed code schemes
3 or one of the plurality of rolling code schemes, the method further comprising:
4 determining whether the received activation signal is based on one of
5 the plurality of fixed code schemes or on one of the plurality of rolling code
6 schemes; and
7 if the received activation signal is based on one of the fixed code
8 schemes, storing a fixed code received in the activation signal and using the stored
9 fixed code to transmit an activation signal.

1 5. The method of claim 4 wherein determining whether the
2 received activation signal is based on one of the fixed code schemes comprises:
3 receiving at least two activation signals from the existing transmitter;
4 and
5 comparing at least a portion of the at least two received activation
6 signals to determine any differences.

1 6. A system for operating an appliance, the appliance responding
2 to an activation signal transmitted from an existing radio frequency transmitter, the
3 system comprising:
4 a receiver operable to receive any of a plurality of radio frequency
5 activation signals;
6 a transmitter operable to transmit any of the plurality of radio
7 frequency activation signals; and
8 control logic in communication with the receiver and the transmitter,
9 the control logic operating in a learn mode and an operate mode, the control logic
10 in learn mode determining and storing a new transmitter identifier different from any
11 existing transmitter identifier received in at least one rolling code activation signal
12 transmitted by the existing transmitter, the control logic in operate mode generating
13 a new activation signal different from any activation signal transmitted by the existing
14 transmitter, the new activation signal including the new transmitter identifier.

1 7. The system of claim 6 wherein the control logic supports a
2 plurality of channels, each channel programmable to a different existing transmitter.

1 8. The system of claim 6 further comprising a user interface
2 placing the control logic in learn mode based on a first user input and causing
3 transmission of the new activation signal based on a second user input.

1 9. The system of claim 6 wherein the control logic is operable
2 in learn mode to determine whether the at least one activation signal transmitted by
3 the existing transmitter is based on a rolling code scheme or a fixed code scheme.

1 10. The system of claim 9 wherein, if the at least one activation
2 signal transmitted by the existing transmitter is a fixed code scheme, the control logic
3 extracting and storing a fixed code from the at least one activation signal transmitted
4 by the existing transmitter.

1 11. The system of claim 10 wherein the control logic in operate
2 mode generates an activation signal including the stored fixed code.

1 12. The system of claim 9 wherein the control logic is operable
2 to determine fixed code scheme or rolling code scheme based on at least two
3 activation signals transmitted by the existing transmitter.

1 13. The system of claim 6 wherein the control logic determines
2 which of a plurality of rolling code schemes was used by the existing transmitter
3 based on receiving a programming mode input.

1 14. A method of programming a programmable radio frequency
2 appliance remote control comprising:
3 receiving a signal from an existing radio frequency remote control,
4 the signal based on one of a plurality of activation schemes;
5 determining if the received signal was generated using one of a
6 plurality of rolling code activation schemes;
7 if so, storing an indication as to which rolling code scheme was used
8 to generate the received signal; and
9 determining and storing a new transmitter identifier different from an
10 existing transmitter identifier associated with the existing transmitter.

1 15. The method of claim 14 further comprising:
2 receiving an activation input signal; and
3 transmitting a new activation signal based on the stored rolling code
4 scheme indication and on the new transmitter identifier.

1 16. The method of claim 14 further comprising:

2 determining if the received signal was generated using one of a
3 plurality of fixed code activation schemes;
4 if so, storing an indication as to which fixed code scheme was used
5 to generate the received signal; and
6 extracting and storing a fixed code from the received signal.

1 17. The method of claim 16 further comprising:
2 receiving an activation input signal; and
3 transmitting a new activation signal based on the stored fixed code
4 scheme indication and on the stored fixed code.

1 18. The method of claim 14 wherein receiving a signal from the
2 existing radio frequency remote control comprises receiving a plurality of signals
3 from the existing radio frequency remote control and wherein determining if the
4 received signal was generated using one of the plurality of rolling code activation
5 schemes is based on an examination of at least two of the plurality of received
6 signals.

1 19. The method of claim 14 wherein the determination of which
2 rolling code scheme was used to generate the received signal is based on receiving
3 a programming mode input.